

and a photographer. Over all, an angel spread his wings—Martin J. Gillen, “a loyal alumnus, an enthusiastic conservationist.” We wish to encourage more such works and more such angels.—HERBERT L. MASON.

Forests and Trees of the Western National Parks. By HAROLD E. BAILEY and VIRGINIA LONG BAILEY. Pp. x + 129 with 71 text figures. Conservation Bulletin no. 6, National Park Service. United States Government Printing Office, Washington, D. C. 1941. Paper, \$.25.

This valuable contribution to the literature of the national parks begins with a short introductory discussion of forest conservation, life zones, structure and functions of a tree and plant associations. The three general forestal regions (Pacific Slope, Rocky Mountain, Southwestern) in which the western national parks are located are briefly characterized. The forest associations and topographic features of the western parks, including those of Alaska and Hawaii, are then treated in some detail. Field keys to the genera and species of trees, non-technical descriptions and general information amount to approximately one-half of the content. A well-selected bibliography and an index to the common and scientific names complete the volume which is printed in clear type and beautifully illustrated with half-tones from photographs. The authors are to be congratulated on this attractive and readable booklet which will be very much appreciated by botanists and foresters as well as by the vacationing public.—ETHEL CRUM.

A Manual of the Higher Plants of Oregon. By MORTON E. PECK. Pp. 1-866, with 1 plate, 1 map and 90 figures. Binford & Mort, Portland, Oregon, 1941. Price \$5.00.

The appearance of a usable manual covering the flora of any state which has not previously been so endowed is an event of the utmost interest to all students of plants. Especially is this true when the book is as thoroughly excellent and generally attractive as this one! There has, heretofore, never been any manual or combination of manuals which would permit satisfactory determination of plants from all parts of Oregon. Furthermore, no one previously has attempted to gather into one volume the various entities described from the state since the appearance of Howell's "Flora of Northwest America," about forty years ago. A very rough tabulation indicates that approximately 250 of these recently described entities, including two genera, collected into the present book, have never before been available in a manual or flora. If the author had performed no other service than to glean these from the scattered literature, characterize them fully and key them out, he would merit unstinted gratitude.

Even those persons who have had considerable experience with the vegetation of the area in question will, I am sure, be amazed at the size of its flora, as revealed in the present volume.

There are included 118 families, 701 genera and 3203 species—more than three-fourths the number of species recorded from California in Jepson's "Manual," in 1925. The area of Oregon is only three-fifths that of California. This suggests a degree of diversity for the flora of Oregon at least equal to that of the California flora, which has long been famous for its high degree of diversity coupled with remarkable endemism.

An introductory survey of the physiographic and floristic features subdivides Oregon into the following nine major "plant areas": northern coast, northern coast mountain, Willamette Valley, Rogue-Umpqua, southern coast, southern coast mountain and Siskiyou, Cascade, eastern Oregon (with five subordinate sections) and Blue Mountain. These represent the remarkable blending of at least six floristic elements: the northwestern coniferous forest, the Cascade, the Rocky Mountain, the Great Basin, the Californian and the Klamath-Siskiyou, a fact which helps to explain the large number of species native to the state. Each area is briefly summarized as to topography, geology, climate and plant assemblages. Important concentrations of endemic species are shown to occur particularly in the Siskiyou and southern coast mountains, Wallowa and Steens mountains, and in the gorges of the Columbia and Snake rivers. This excellent summary is made particularly valuable by the author's thorough familiarity over a long period of years with nearly every corner of the state.

The book is attractively bound in green cloth and is so firmly constructed that it should hold up well even under intensive field usage. Each family, genus and species is carefully keyed out, and for each species there is provided an English name, a full description, and a brief expression of its local and general range. The author bravely discards the traditional "Oregon Myrtle," often claimed locally to be "native only to Oregon and the Holy Land," for the more accurate "California Laurel." All sub-specific entities are given the status of "variety," necessitating most of the new combinations proposed. The International Rules are strictly adhered to in the matter of capitalization of all specific epithets which are derived from personal names, or are generic or vernacular names. There is a notably large glossary of technical terms accompanied by ninety helpful illustrations of plant parts; thirty-six pages of index to families, genera and species, including both technical and English names, and their synonyms, conclude the volume.

Mr. J. William Thompson has contributed the entire manuscript for the Pteridophyta and various specialists have prepared keys, or have aided with determinations or advice. The bulk of the taxonomic treatment, however, represents the author's painstaking effort to weigh everything that has been written about Oregon plants against his own sound taxonomic judgment and his unrivalled knowledge of the area of which he writes. The manual is the culmination of many years of devotion to the flora

of the state, and is based largely upon his own extensive collections, now permanently housed at Willamette University, Salem, Oregon.

From the fine quality of the book, one would not suspect the handicaps under which it was conceived and carried out. Much of the bibliographical work had to be concentrated into infrequent visits to the larger botanical centers, and herbarium study had necessarily to be limited chiefly to the author's personal collections. Dr. Peck's achievement is a credit to his own ability and perseverance, and should greatly encourage in the Pacific Northwest the study of the science to which he has given so many years of his life. Systematic botany in Oregon will henceforth be sharply divided into the period *before* and that *after* the appearance of this book. The author has provided a point of reference and of departure for all future work in the state, an achievement whose value can scarcely be overestimated. This manual will stand as a perpetual challenge to those in the smaller institutions and elsewhere, who imagine themselves unable to carry on productive work because of the lack of facilities or funds, or because of their isolation from the centers of scientific activity. Such obstacles have failed to prevent Dr. Peck from making a brilliantly successful contribution to systematic botany.—L. CONSTANCE.

NOTES AND NEWS

FIELD WORK OF THE BUREAU OF PLANT INDUSTRY IN NEVADA. For years it has seemed desirable to gather up the rapidly vanishing plant lore of the Indians in Nevada. Stimulated by the interest of officials of the Office of Indian Affairs in Nevada and by the University of Nevada, a special project was initiated by the Bureau of Plant Industry which is interested in the plants themselves. From this have ramified various excellent projects. Since a wide knowledge of the state flora was necessary for the basic organization of the other data, the collection and classification of the flora became almost the primary concern. The work has continued for four years, beginning in 1937, and during that time several subsidiary projects have been undertaken.

During the first year there were six groups of collectors, most of them hired merely as collectors, who were sent out in pairs to different sections. There were six other collectors who travelled alone or with an assistant. Among these, under the general direction of W. A. Archer of the Bureau of Plant Industry were: Roy A. Allen, Tim Louise Breene, George E. Franklin, Jr., Frank S. Goodner, Newell F. Hancock, William G. Henning, James R. Henrichs, Philip A. Lehenbauer, Ira LaRivers, Lauritz Lund, William E. McKenzie, Mrs. Edith V. A. Murphey, Loretta R. Miller, Benjamin O. Moore, Norman E. Nichols, Benjamin A. Rives, Harry Sampson and Percy Train. After the first year the collections were made by Dr. Archer and Mr. Train.